

Please add the following new claims:

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--28. (NEW) A method for using a  $\beta$ -glycosidase, comprising the following steps:

(a) providing a  $\beta$ -glycosidase, wherein the  $\beta$ -glycosidase comprises a tetramer of four subunits, and at least one subunit is encoded by a nucleic acid comprising a sequence capable of hybridizing to SEQ ID NO:1, or its complement, under conditions comprising a hybridization step comprising 6xSSC and 50% formamide at 42°C and a washing step comprising 6xSSC and 40% formamide at 25°C, and the  $\beta$ -glycosidase is active at temperatures at or above about 90°C or higher; and

(b) contacting the  $\beta$ -glycosidase with a substrate under conditions wherein the  $\beta$ -glycosidase functions as a  $\beta$ -glycosidase on the substrate.

29. (NEW) The method of claim 28, wherein all four subunits are encoded by a nucleic acid comprising a sequence capable of hybridizing to SEQ ID NO:1, or its complement, under conditions comprising 6xSSC and 40% formamide at 42°C.

30. (NEW) A method for using a  $\beta$ -glycosidase, comprising the following steps:

D<sup>3</sup> (a) providing a  $\beta$ -glycosidase, wherein the  $\beta$ -glycosidase comprises a tetramer of four subunits, and each subunit is encoded by a nucleic acid comprising a sequence capable of hybridizing to SEQ ID NO:1, or its complement, under conditions comprising a hybridization step comprising 6xSSC and 40% formamide at 42°C and a washing step comprising 1xSSC and 0% formamide at 55°C, and the  $\beta$ -glycosidase is active at temperatures at or above about 90°C or higher; and

(b) contacting the  $\beta$ -glycosidase with a substrate under conditions wherein the  $\beta$ -glycosidase functions as a  $\beta$ -glycosidase on the substrate.

31. (NEW) A method for using a  $\beta$ -glycosidase, comprising the following steps:

(a) providing a  $\beta$ -glycosidase, wherein the  $\beta$ -glycosidase comprises a tetramer of four subunits, and each subunit is encoded by a nucleic acid comprising a sequence capable of

hybridizing to SEQ ID NO:1, or its complement, under conditions comprising a hybridization step comprising 6xSSC and 30% formamide at 42°C and a washing step comprising 0.1xSSC and 0% formamide at 62°C, and the  $\beta$ -glycosidase is active at temperatures at or above about 90°C or higher; and

(b) contacting the  $\beta$ -glycosidase with a substrate under conditions wherein the  $\beta$ -glycosidase functions as a  $\beta$ -glycosidase on the substrate.

32. (NEW) A method for making a  $\beta$ -glycosidase enzyme, comprising the following steps:

(a) providing four subunits of a tetramer, wherein each subunit is encoded by a nucleic acid comprising a sequence capable of hybridizing to SEQ ID NO:1, or its complement, under conditions comprising a hybridization step comprising 6xSSC and 50% formamide at 42°C and a washing step comprising 6xSSC and 40% formamide at 25°C, and the  $\beta$ -glycosidase is active at temperatures at or above about 90°C or higher; and

(b) contacting the four subunits together under conditions wherein they form a tetrameric enzyme comprising a  $\beta$ -glycosidase activity.

33. (NEW) A method for hydrolyzing a  $\beta$ -glycoside, comprising the following steps:

(a) providing a  $\beta$ -glycosidase, wherein the  $\beta$ -glycosidase comprises a tetramer of four subunits, and each subunit is encoded by a nucleic acid comprising a sequence capable of hybridizing to SEQ ID NO:1, or its complement, under conditions comprising a hybridization step comprising 6xSSC and 50% formamide at 42°C and a washing step comprising 6xSSC and 40% formamide at 25°C, and the  $\beta$ -glycosidase is active at temperatures at or above about 90°C or higher; and

(b) contacting the  $\beta$ -glycosidase with a  $\beta$ -glycoside under conditions wherein the  $\beta$ -glycosidase hydrolyzes the  $\beta$ -glycoside.--

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